CLAIMS

1. Apparatus for ~~transmitting~~ broadcasting data relating to the status of user terminals in a mobile communications system from a central station having a database for storing said data to a plurality of local stations each having a local database for storing said data, the apparatus comprising means for broadcasting said data in a common channel receivable by each of said local stations; means for receiving error correction request signals from each of said local stations; and means for sending error correction signals to each of said local stations in response to said error correction request signals.

2. Apparatus as claimed in claim 1, wherein said data is broadcast in a plurality of frames, said error correction request signals indicate selected ones of said frames, and said means for sending error correction signals is responsive to said error correction request signals to retransmit the selected frames.

3. A method of ~~transmitting~~ broadcasting data relating to the status of user terminals in a mobile communications system from a central station having a database for storing said data to a plurality of local stations

each having a database for storing said data, the method comprising broadcasting said data in a common channel receivable by each of said local stations; receiving error correction request signals from each of said local stations; and sending error correction signals to each of said local stations in response to said error correction request signals.

4. A method as claimed in claim 3, wherein said data is broadcast in a plurality of frames, said error correction request signals indicate selected ones of said frames, and the step of sending error correction signals comprises retransmitting said selected frames.

5. Apparatus for ~~transmitting~~ broadcasting data to a plurality of data receiving stations, comprising:

means for transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

means for receiving error correction request signals indicating selected ones of said frames from each of said receiving stations; and

means for retransmitting said selected frames to each of said receiving stations in response to said error correction request signals; wherein said means for retransmitting is operable, if a plural number of

said error correction request signals indicating the same selected frame are received within a predetermined period, to retransmit said same selected frame less than said plural number of times.

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6. Apparatus as claimed in claim 5, wherein said means for retransmitting is operable to retransmit each selected frame only if said selected frame has not previously been transmitted within said predetermined period.

broadcasting

7. A method of ~~transmitting~~ data to a plurality of data receiving stations, comprising:

transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames, receiving error correction request signals indicating selected ones of said frames from one or more of said receiving stations, and retransmitting said selected frames to said receiving stations; wherein, if a plural number of said error correction request signals indicating the same selected frame are received within a predetermined period, the step of retransmitting said selected frames comprises retransmitting said same selected frame less than said plural number of times.

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8. A method as claimed in claim 5, wherein said retransmitting step comprises retransmitting each selected frame only if that selected frame has not previously been transmitted within said predetermined period.

9. Apparatus for transmitting data to a plurality of data receiving stations, comprising:

means for transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

means for receiving error correction request signals indicating selected ones of said frames from each of said receiving stations;

means for transmitting said selected frames to each of said receiving stations in response to said error correction request signals and means for receiving from each of said receiving stations acknowledgement signals indicating the earliest of said frames which has not been received by that station, wherein the means for transmitting is operable to broadcast a new frame which has not been previously broadcast only if the sequential order of said new frame is less than a predetermined number greater than the earliest of said frames which has not been received by any one of said receiving stations.

10. A method of transmitting data to a plurality of data receiving stations, comprising:

transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

receiving error correction request signals indicating selected ones of said frames from one or more of said receiving stations;

retransmitting said selected frames to said receiving stations; and receiving from each of said local stations acknowledgement signals indicating the earliest in sequence of said frames which has not been received by that local station, wherein a new frame which has not previously been broadcast is broadcast only if the sequential order of said new frame is less than a predetermined number greater than the earliest of said frames which has not been received by any one of said local stations.

11. Apparatus for ~~transmitting~~ broadcasting data to a plurality of data receiving stations, comprising:

means for transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

means for receiving error correction request signals indicating selected ones of said frames from

each of said receiving stations; and

means for transmitting said selected frames to each of said receiving stations in response to said error correction request signals; wherein the frames are broadcast in a format including frame sequence information indicating the sequence of each frame, but not including receive state information indicating the sequence of any frames received from any of the receive stations.

12. Apparatus as claimed in claim 11, wherein the frames are broadcast in a format complying with the standard ISO/IEC 7809, option 10, except that some or all of the receive state variable field as defined in that standard is occupied by the send state variable field.

13. Apparatus as claimed in claim 12, wherein the send state variable field is eleven bits in length.

14. A method of ~~transmitting~~ broadcasting data to a plurality of data receiving stations, comprising:

transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

receiving error correction request signals

indicating selected ones of said frames from one or more of said receiving stations; and

retransmitting said selected frames to said receiving stations; wherein the frames are ~~transmitted~~ broadcast in a format including frame sequence information indicating the sequence of each frame, but not including receive state information indicating the sequence of any frames received from any of the local stations.

15. A method as claimed in claim 14, wherein the frames are transmitted in a format complying with the standard ISO/IEC 7809, option 10, except that some of all of the receive state variable field as defined in that standard is occupied by the send state variable field.

16. A method as claimed in claim 15, wherein the send state variable field is eleven bits in length.

17. Apparatus for transmitting data to a plurality of data receiving stations, comprising:

means for transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

means for receiving error correction request

signals indicating selected ones of said frames from each of said receiving stations;

means for transmitting said selected frames to each of said receiving stations in response to said error correction request signals;

means for receiving a link request signal from an additional receiving station; and means for transmitting to the additional receiving station in response to said link request signal information indicating the sequence number of the latest transmitted frame.

18. A method of transmitting data to a plurality of data receiving stations, comprising:

transmitting said data in a common channel receivable by each of said receiving stations in a format comprising a plurality of frames;

receiving error correction request signals indicating selected ones of said frames from one or more of said receiving stations; and

retransmitting said selected frames to said receiving stations, the method further comprising receiving a link request signal from an additional receiving station, and transmitting to the additional receiving station in response thereto information indicating the sequence number of the latest

transmitted frame.

19. Apparatus for receiving data from a broadcast station, comprising means for receiving said data and means for transmitting to the broadcast station at predetermined intervals an error status signal which indicates whether error correction information is required from the central station.

20. Apparatus as claimed in claim 19, wherein the means for transmitting is additionally responsive to a polling signal from the central station to transmit said error status signal.

21. Apparatus as claimed in claim 19 or 20, wherein said data is broadcast in a plurality of frames, and wherein said error status signal comprises either an error correction request signal indicating selected ones of said frames which were not correctly received, or a signal indicating that no error correction is required.

22. A method of receiving data from a broadcast station, comprising receiving said data and transmitting to the broadcast station at predetermined intervals an error status signal which indicates

whether error correction information is required from said central station.

23. A method as claimed in claim 22, further comprising additionally transmitting said error status signal in response to a polling signal from said broadcast station.

24. A method as claimed in claim 22 or 23, wherein said data is broadcast in a plurality of frames and said error status signal comprises either an error correction request signal indicating selected ones of said frames which were not correctly received, or a signal indicating that no error correction is required.

25. Apparatus for receiving data from a broadcast station, comprising:

means for transmitting to said broadcast station a link request signal;

means for receiving from said broadcast station information indicating a current broadcast sequence number; and means for receiving said data in a format comprising a sequence of frames.

26. A method of receiving data from a broadcast

station, comprising:

transmitting a link request signal to said broadcast station;

receiving from said broadcast station information indicating a current frame number for said data;

and receiving said data in a format comprising a sequence of frames.

27. Apparatus for receiving data from a broadcast station, comprising:

means for receiving said data in a format comprising a sequence of frames; and

means for transmitting signals to said broadcast station in a format including receive state information indicating the sequence number of the last in sequence of the received frames, but not including transmit state information indicating the sequence of any frames transmitted to the broadcast station.

28. Apparatus as claimed in claim 27, wherein the frames are transmitted in a format complying with the standard ISO/IEC 7809, option 10, except that some or all of the send state variable field as defined in that standard is occupied by the receive state variable field.

29. A method of receiving data from a broadcast station, comprising:

receiving said data in a format comprising a sequence of frames; and

transmitting signals to said broadcast station in a format including receive state information indicating the sequence number of the last in sequence of the received frames, but not including transmit state information indicating the sequence of any frames transmitted to the broadcast station.

30. A method as claimed in claim 29, wherein the frames are transmitted in a format complying with the standard ISO/IEC 7809, option 10, except that some or all of the send state variable field as defined in that standard is occupied by the receive state variable field.

31. Apparatus as claimed in any one of claims 1, 2, 5, 6, 9, 11, 12, 13, 17, 19, 20, 21, 25, 27 and 28, wherein the data is broadcast via satellite.

32. A method as claimed in any one of claims 3, 4, 7, 8, 10, 14, 15, 16, 18, 22, 23, 24, 29 and 30, wherein the data is broadcast via satellite.

33. Apparatus as claimed in any one of claims 5, 6, 9, 11, 12, 13, 17, 19, 20, 21, 25, 27 and 28, wherein the data relates to the status of user terminals in a mobile communications system and each of the receiving stations has associated therewith a database for storing said data.

34. A method as claimed in any one of claims 7, 8, 10, 14, 15, 16, 18, 22, 23, 24, 29 and 30, wherein the data relates to the status of user terminals in a mobile communications system and each of the receiving stations has associated therewith a database for storing said data.

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